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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/620,707	07/20/2000	Masaharu Ogawa	Q58688	3363

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EXAMINER
KAO, CHIH-CHENG G

ART UNIT	PAPER NUMBER
2882	

DATE MAILED: 12/05/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/620,707	OGAWA, MASAHARU	
	Examiner	Art Unit	
	Glen Kao	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-7 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-7 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 20 July 2000 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Specification

1. The specification is objected to because the attempt to incorporate subject matter into this application by reference to Japanese Unexamined Patent Publication Nos. 10(1998)-271374, 11(1999), and 11(1999)-89553 is improper. The references as indicated in the specification and the information disclosure statement do not match in that they do not have the same applicant or assignee. It is highly recommended that the applicant submit another information disclosure statement with the correct corresponding references to obviate this objection.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "20" in Figures 1A – 1C and Figures 6A – 6C has been used to designate both the solid state radiation detector of the first and fifth embodiment. Labeling the fifth embodiment as "20d" in the corresponding figures and the specification would obviate this objection. Correction is required.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "L1" and "L2". Correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai (EP 0898421).

5. Regarding claim 1, Imai discloses a solid state radiation detector (Fig. 15A) comprising: a first electrode layer (Fig. 15A, #1), a recording photoconductive layer (Fig. 15A, #2), a reading photoconductive layer (Fig. 15A, #4), a second electrode layer constructed of a large number of main line electrodes (Fig. 15A, #5 and 5a), said layers being stacked in recited order, and a large number of secondary line electrodes (Fig. 15A, #8a), for outputting an electrical signal which has level proportional to a quantity of latent image charge stored in a charge storage portion formed between the said photoconductive layers, wherein the condition equation of $(W_b \text{ X } P_b) / (W_c \text{ X } P_c) \geq 1$ is satisfied (main and secondary electrodes having the same width and transmission). However, Imai does not specifically disclose the secondary and main line electrode alternately arranged in parallel to one another.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the secondary and main line electrode alternately arranged in parallel to one another with the device of Imai, since it would only involve routine skill in the art to rearrange parts of an invention. One would be motivated to arrange the electrodes in such a matter based on ease of manufacturing. If the main line electrodes were already manufactured within the second electrode, making a main line electrode into a secondary line electrode would in a sense only redefine the use of a main line electrode. Thus, a manufacturing step is eliminated.

6. Regarding claim 2, Imai suggests a device as recited above. However, Imai does not specifically disclose wherein the condition equation of $(W_b \times P_b) / (W_c \times P_c) \geq 5$ is satisfied.

On the other hand, Imai further disclose that the width of the electrode can be made smaller (col. 31, lines 45-46).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the condition equation of $(W_b \times P_b) / (W_c \times P_c) \geq 5$ satisfied with the suggested device of Imai, since it would only involve routine skill in the art to discover the optimum or workable ranges where the general conditions of a claims are disclosed in the prior art. One would be motivated to satisfy the condition equation to further increase the sharpness as shown by Imai (col. 31, lines 47-48).

Secondly, it would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the condition equation of $(W_b \times P_b) / (W_c \times P_c) \geq 5$ satisfied with the suggested device of Imai, since it would only involve routine skill in the art to change the size of the electrode by changing the width. One would be motivated to satisfy the condition equation to further increase the sharpness as shown by Imai (col. 31, lines 47-48).

7. Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai as applied respectively to claims 1 and 2 above, and further in view of Nelson et al. (US Patent 5,508,507). Imai suggests a device as recited above. However, Imai does not specifically disclose line electrodes made of any one among a list of compounds including aluminum.

Nelson et al. teaches electrodes made of aluminum (col. 14, lines 48-49).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the aluminum electrodes of Nelson et al. with the suggested device of Imai, since one it would have been within the general skill of a worker in the art to select a known material on the basis of its suitability for its intended use as shown by Nelson et al, wherein that use is electrical conductivity which is characteristic of aluminum and its semi-transparent characteristics (col. 9, lines 7-8) for allowing light to travel through as shown in Figure 1.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glen Kao whose telephone number is (703) 605-5298. The examiner can normally be reached on M - Th (8 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

gk
November 14, 2001

ROBERT H. KIM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800